

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/866,422	HIRANO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Fred Tzeng	2651	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/26/2004 and 1/18/2005.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☒ The drawings filed on 07 November 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with attorney, Mr. Joseph P. Fox, on January 18, 2005.

2. The application has been amended as follows:

Claim 1. (Currently amended) A disk unit having a function of loading a head on a disk from a holding mechanism during a load operation and unloading the head from the disk during an unloading operation, comprising: a controller to control a movement of the head so that the loading operation and the unloading operation are carried out in a predetermined specific region on the disk, said specific region extending through an angular range smaller than 360° and being non-recordable.

Claim 7. (Currently amended) A disk unit having a function of loading a head on a disk from a holding mechanism during a load operation and unloading the head from the disk during an unloading operation, comprising:

a controller to control a movement of the head so that the loading operation and the unloading operation are carried out in a specific region on the disk, said specific region extending through an angular range smaller than 360° and being non-recordable; and a motor to rotate the disk, wherein said controller controls the movement of the head so that the load operation and the unload operation are carried out based on a

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rotary position of the motor, and said controller detects the rotary position of the motor a plurality of times during one revolution of the motor, and sets the specific region on the disk with respect to each detected rotary position of the motor.

Claim 9. (Currently amended) A disk unit having a function of loading a head on a disk from a holding mechanism during a load operation and unloading the head from the disk during an unloading operation, comprising: a controller to control a movement of the head so that the loading operation and the unloading operation are carried out uniformly in a circumferential direction of the disk within a predetermined specific region on the disk, said specific region extending through an angular range smaller than 360° and being non-recordable.

Claim 10. (Currently amended) A disk unit having a function of loading a head on a disk from a holding mechanism during a load operation and unloading the head from the disk during an unload operation, comprising:

a controller to control a movement of the head so that the loading operation and the unloading operation are carried out uniformly in a circumferential direction of the disk within a specific region on the disk, wherein said controller controls the movement of the head so that a position on the disk where the head is loaded during the load operation and the head is unloaded during the unload operation is successively shifted by a predetermined distance in the circumferential direction of the disk within the specific region on the disk for each load operation and each unload operation, and wherein said specific region extends through an angular range less than 360° and being non-recordable.

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Claim 11. (Currently amended) A disk unit having a function of loading a head on a disk from a holding mechanism during a load operation and unloading the head from the disk during an unload operation, comprising:

a controller to control a movement of the head so that the loading operation and the unloading operation are carried out uniformly by a circumferential direction of the disk within a specific region on the disk; and a motor to rotate the disk, said controller controlling the movement of the head so that a position on the disk where the head is loaded during the load operation and the head is unloaded during the unload operation is successively shifted by a predetermined distance in the circumferential direction of the disk within the specific region on the disk for each load operation and each unload operation, by detecting a rotary position of the motor and delaying a time until the load operation or the unload operation is carried out from a predetermined rotary position of the motor, and wherein said specific region extends through an angular range less than 360° and being non-recordable.

Claim 12. (Currently amended) A disk unit having a function of loading a head on a disk from a holding mechanism during a load operation and unloading the head from the disk during an unload operation, comprising:

a controller to control a movement of the head so that the loading operation and the unloading operation are carried out uniformly in a circumferential direction of the disk within a specific region on the disk, wherein data is recordable in region of the disk including the specific region, and wherein said specific region extends through an angular range less than 360° and being non-recordable.

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Claim 13. (Currently amended) A disk unit having a function of loading a head on a disk from a holding mechanism during a load operation and unloading the head from the disk during an unload operation, comprising:

a controller to control a movement of the head so that the loading operation and the unloading operation are carried out uniformly in a circumferential direction of the disk within a specific region on the disk; and a motor to rotate the disk, said controller detecting a rotary position of the motor by detecting a back-electromotive voltage generated by a rotation of the motor, and controlling timings of the load operation and unload operation based on the detected rotary position, and wherein said specific region extends through an angular range less than 360° and being non-recordable.

Claim 15. (Currently amended) A disk unit having a function of loading a head on a disk from a holding mechanism during a load operation and unloading the head from the disk during an unload operation, comprising:

A controller to control a movement of the head so that the loading operation and the unloading operation are carried out in a specific region on the disk, said specific region defined by a detection signal output from a detection circuit and extending through an angular range smaller than 360° and being non-recordable.

### **Reason for Allowance**

3. The following is an examiner's statement of reasons for allowance:

Claims 1-16 are allowable over the prior art of record because none of the prior art of record teaches or fairly suggests a disk unit includes a controller which controls a movement of the head so that the loading and the unloading operations are carried out in a specific region on the disk uniformly in a circumferential direction, and the specific region extends for an angular range smaller than 360 degree and being non-recordable. It is noted the closest prior art, the instant application admitted prior art (pages 1-3 and page 4 lines 1-14) shows a disk unit with loading and unloading operations occurred between data recording prohibited region Ad and ramp 116. However, the instant application admitted prior art fails to disclose a disk unit includes a controller which controls a movement of the head so that the loading and the unloading operations are carried out in a specific region on the disk uniformly in a circumferential direction, and the specific region extends for an angular range smaller than 360 degree and being non-recordable.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (formal communications, please mark  
"EXPEDITED PROCEDURE")

Or:

(703) 308-6606 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021  
Crystal Drive, Arlington. V.A., Sixth Floor (receptionist).

6. Any inquiry concerning this communication from the examiner should be directed to Fred Tzeng whose telephone number is 703-305-4841. The examiner can normally be reached on weekdays from 9:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 703-308-4825. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-5710 for After Final communications.

7. Informal regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Fred F. Tzeng

January 18, 2005



DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
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